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Claim Amendment under 37 CFR 1.121(c)

1. (Currently amended) A three-dimensional imaging device comprising:

- 5 a) a micromirror array lens, wherein the micromirror array lens comprises a plurality of micromirrors, wherein each of the micromirrors is controlled independently, wherein each of the micromirrors is controlled to change the  
10 focal length of the micromirror array lens, wherein the micromirror array lens is a reflective Fresnel lens;
- b) an imaging unit on which an image of the object at a given focal length of the micromirror array lens is formed; and
- 15 c) an image processing unit processing the image on the imaging unit to produce a two-dimensional image at the given focal length[[]].

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2. (Original) The three-dimensional imaging device of claim 1, wherein the focal plane of the three-dimensional imaging device is changed by change of focal length of the micromirror array lens.

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3. (Original) The three-dimensional imaging device of claim 1, wherein the imaging unit comprises one or more two-dimensional image sensor taking the two-dimensional image at each focal plane.

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4. (Currently amended) The three-dimensional imaging device of claim 1, the image processing unit generates all-in-focus image and depth information for the all-in-focus image from the two-dimensional images, ~~wherein all the processes are achieved within a unit time which is less than or equal to the afterimage time of the human eye.~~

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5. (Cancelled)

- 15 6. (Cancelled)

7. (Currently amended) The three-dimensional imaging device of claim [[5]] 1, wherein the translational motion of each of the micromirrors is controlled.

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8. (Currently amended) The three-dimensional imaging device of claim [[5]] 1, wherein the rotational motion of each of the micromirrors is controlled.

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9. (Currently amended) The three-dimensional  
imaging device of claim ~~[[5]]~~ 1, wherein the  
rotational motion and the translational motion of  
5 each of the micromirrors are controlled.
10. (Currently amended) The three-dimensional  
imaging device of claim ~~[[5]]~~ 1, wherein the  
micromirrors are arranged to form one or more  
10 concentric circles.
11. (Currently amended) The three-dimensional  
imaging device of claim ~~[[5]]~~ 1, wherein each  
micromirror of the micromirror array lens has a fan  
15 shape.
12. (Currently amended) The three-dimensional  
imaging device of claim ~~[[5]]~~ 1, wherein the  
reflective surface of each micromirror of the  
20 micromirror array lens is substantially flat.
13. (Currently amended) The three-dimensional  
imaging device of claim ~~[[5]]~~ 1, wherein the  
reflective surface of each micromirror of the  
25 micromirror array lens has a curvature.

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14. (Original) The three-dimensional imaging device of claim 13, wherein the curvature is controlled.

5 15. (Currently amended) The three-dimensional imaging device of claim [[5]] 1, wherein each micromirror of the micromirror array lens is actuated by electrostatic force.

10 16. (Currently amended) The three-dimensional imaging device of claim [[5]] 1, wherein each micromirror of the micromirror array lens is actuated by electromagnetic force.

15 17. (Currently amended) The three-dimensional imaging device of claim [[5]] 1, wherein each micromirror of the micromirror array lens is actuated by electrostatic force and electromagnetic force.

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18. (Currently amended) The three-dimensional imaging device of claim [[5]] 1, wherein the reflective surface of each of the micromirrors is made of metal.

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19. (Currently amended) The three-dimensional  
imaging device of claim 1, wherein the  
micromirrors are arranged in a flat plane.
- 5 20. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens  
further comprises a plurality of mechanical  
structures upholding the micromirrors and actuating  
components actuating the micromirrors, wherein the  
10 mechanical structure and the actuating components  
are located under the micromirrors.
21. (Cancelled)
- 15 22. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens is an  
adaptive optical component, wherein the micromirror  
array lens compensates for phase errors of light  
introduced by the medium between an object and its  
20 image.
23. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens is an  
adaptive optical component, wherein the micromirror  
25 array lens corrects aberrations.

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24. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens is an  
adaptive optical component, wherein the micromirror  
array lens corrects the defects of the three-  
dimensional imaging system that cause the image to  
deviate from the rules of paraxial imagery.

25. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens is an  
adaptive optical component, wherein an object which  
does not lie on the optical axis can be imaged by  
the micromirror array lens without macroscopic  
mechanical movement.

26. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens is  
controlled to satisfy the same phase condition for  
each wavelength of Red, Green, and Blue (RGB),  
respectively, to get a color image.

27. (Original) The three-dimensional imaging device  
of claim 26, further comprising a plurality of  
bandpass filters.

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28. (Original) The three-dimensional imaging device  
of claim 26, further comprising photoelectric  
sensors, wherein the photoelectric sensors comprises  
Red, Green, and Blue (RGB) sensors, wherein color  
5 images are obtained by treatments of electrical  
signals from the Red, Green, and Blue (RGB) sensors.

29. (Original) The three-dimensional imaging device  
of claim 28, wherein the treatment of electrical  
10 signals from the Red, Green and Blue (RGB) sensors  
is synchronized and/or matched with the control of  
the micromirror array lens to satisfy the same phase  
condition for each wavelength of Red, Green and Blue  
(RGB), respectively.

15 30. (Original) The three-dimensional imaging device  
of claim 1, further comprising a beam splitter  
positioned in the path of light between the imaging  
unit and the micromirror array lens.

20 31. (Original) The three-dimensional imaging device  
of claim 1, wherein the micromirror array lens is  
positioned so that the path of the light reflected  
by the micromirror array lens is not blocked.

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32. (Original) The three-dimensional imaging device  
of claim 1, further comprising one or more auxiliary  
lenses having a predetermined focal length, and  
wherein the effective focal length of the imaging  
5 system is determined by the micromirror array lens  
and the auxiliary lens together.

33. (Original) The three-dimensional imaging device  
of claim 1, further comprising one or more auxiliary  
10 lenses having a predetermined focal length, and  
wherein the numerical aperture of the imaging system  
is increased by the auxiliary lens.